

What is claimed is:

1. A microscopic observing apparatus comprising:
a probe microscope and
5 a stereoscopic microscope,
wherein an optical axis of the probe microscope is placed between two optical
axes of the stereoscopic microscope.
2. The microscopic observing apparatus according to Claim 1, wherein a probe
10 body housing an optical system of the probe microscope is supported by a first
supporting member that avoids the two optical axes of the stereoscopic microscope.
3. The microscopic observing apparatus according to Claim 1, wherein a probe
body housing an optical system of the probe microscope is supported by a second
15 supporting member that is formed from a transparent material.
4. A probe microscope that is used in combination with a stereoscopic microscope,
wherein
an optical axis of the probe microscope is positioned between two optical axes
20 of the stereoscopic microscope.
5. A microscopic observing apparatus comprising:
a probe microscope;
an auxiliary microscope;
25 a specimen stage on which is placed a subject of observation that is to be

observed using the probe microscope and the auxiliary microscope, and that allows an absolute position of the subject of observation to be adjusted;

a first guide that guides the probe microscope and the auxiliary microscope in one direction above the specimen stage;

5 a connecting member that maintains a constant spacing between optical axes of the probe microscope and the auxiliary microscope;

a first restricting member that restricts further movement of the auxiliary microscope when a position of an optical axis of the auxiliary microscope matches a predetermined position on the first guide; and

10 a second restricting member that restricts further movement of the probe microscope when a position of an optical axis of the probe microscope matches the predetermined position.

6. A microscopic observing apparatus comprising:

15 a probe microscope;

an auxiliary microscope;

a specimen stage on which is placed a subject of observation that is to be observed using the probe microscope and the auxiliary microscope, and that allows an absolute position of the subject of observation to be adjusted;

20 a first microscope holding member that holds the auxiliary microscope and the probe microscope such that they can be rotated so as to pass above the specimen stage; and

a third restricting member that restricts further rotation of the auxiliary microscope when an optical axis position of the auxiliary microscope matches a

25 predetermined position on the specimen stage, and that restricts further rotation of the

probe microscope when an optical axis position of the probe microscope matches the predetermined position.

7. A microscopic observing apparatus comprising:

5 a probe microscope;

an auxiliary microscope;

a specimen stage on which is placed a subject of observation that is to be observed using the probe microscope and the auxiliary microscope, and that allows an absolute position of the subject of observation to be adjusted;

10 a second guide that extends between the probe microscope and the auxiliary microscope;

a fourth restricting member that restricts further movement of the specimen stage when a predetermined position on the specimen stage arrives at an optical axis position of the auxiliary microscope; and

15 a fifth restricting member that restricts further movement of the specimen stage when the predetermined position on the specimen stage arrives at an optical axis position of the probe microscope,

wherein the specimen stage has a rough movement stage that moves along the second guide, and a precise movement stage whose relative position relative to the rough movement stage can be precisely adjusted and on which the subject of observation is placed, and

the predetermined position is set for the rough movement stage.

8. The microscopic observing apparatus according to Claim 7, wherein an aperture

25 portion that penetrates the specimen stage in a vertical direction is formed in the

specimen stage, and the probe microscope and the stereoscopic microscope are able to observe the subject of observation from the underside of the specimen stage via the aperture portion.

5 9. A microscopic observing apparatus comprising:

 a probe microscope;

 an auxiliary microscope;

 a specimen stage on which is placed a subject of observation that is to be observed using the probe microscope and the auxiliary microscope,

10 wherein an aperture portion that penetrates the specimen stage in a vertical direction is formed in the specimen stage, and

 the microscopic observing apparatus is provided with: a second microscope holding member that holds the probe microscope and the auxiliary microscope below the specimen stage such that optical axes of the probe microscope and the auxiliary

15 microscope penetrate the aperture portion and intersect at a position on the subject of observation; and an adjusting device that adjusts relative positions between the specimen stage and the auxiliary microscope and probe microscope.

10. The microscopic observing apparatus according to Claim 5, wherein the

20 microscopic observing apparatus is provided with a first laser light irradiation device that irradiates laser light onto a position where the optical axis of the auxiliary microscope strikes the subject of observation.

11. A microscopic observing apparatus comprising:

25 a probe microscope;

an auxiliary microscope;

a specimen stage on which is placed a subject of observation that is to be observed using the probe microscope and the auxiliary microscope, and that allows an absolute position of the subject of observation to be adjusted; and

5 a second laser light irradiation device that irradiates laser light that is coaxial with the optical axis of the probe microscope onto the subject of observation,

wherein the auxiliary microscope is located such that the laser light irradiated onto the subject of observation is visible.

10 12. The microscopic observing apparatus according to Claim 11, wherein the auxiliary microscope is a video microscope including a CCD camera with a macro lens, and that is held together with the probe microscope by a third microscope holding member.

15 13. The microscopic observing apparatus according to Claim 10, wherein when the subject of observation is a fluorescent sample, an excitation wavelength is used for the wavelength of the laser light.

14. A microscopic observing apparatus comprising:

20 a probe microscope;

an auxiliary microscope;

a specimen stage on which is placed a subject of observation that is to be observed using the probe microscope and the auxiliary microscope;

a fourth microscope holding member that holds the probe microscope and that

25 allows a position of an optical axis of the probe microscope to be adjusted relative to a

predetermined position on the specimen stage;

a fifth microscope holding member that holds the auxiliary microscope such that an optical axis of the auxiliary microscope intersects with an optical axis of the probe microscope;

5 a rotation mechanism that rotatably supports the fifth microscope holding member; and

a sixth restricting member that stops a rotation of the fifth microscope holding member when the fifth microscope holding member is rotated by the rotation mechanism and an optical axis of the auxiliary microscope matches the predetermined position.

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15. A microscopic observing apparatus comprising:

a probe microscope;

an auxiliary microscope;

a specimen stage on which is placed a subject of observation that is to be

15 observed using the probe microscope and the auxiliary microscope;

a sixth microscope holding member that holds the probe microscope and that allows a position of an optical axis of the probe microscope to be adjusted relative to a predetermined position on the specimen stage;

a seventh microscope holding member that holds the auxiliary microscope such
20 that it can be rotated so as to pass through a position above the probe microscope that is placed at the predetermined position; and

a seventh restricting member that stops a rotation of the seventh microscope holding member when an optical axis of the auxiliary microscope matches the predetermined position,

25 wherein the auxiliary microscope is a stereoscopic microscope, and

when the stereoscopic microscope and the probe microscope are both placed above the predetermined position, the probe microscope is placed within a dead angle region of the stereoscopic microscope.